



1449 VOL-39

1-21

Library of the Museum

OF

3

COMPARATIVE ZOOLOGY,

AT HARVARD COLLEGE, CAMBRIDGE, MASS.

Founded by private subscription, in 1861.

~~~~~

Deposited by ALEX. AGASSIZ.

No.

7527

June 25, 1896 - February 6, 1897





New Series, No. 153 (Vol. 39, Part 1).

Price 10s.

JUN 12 1896

MAY, 1896. 1449  
1-21

7527  
THE  
QUARTERLY JOURNAL

OF

MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

*Linacre Professor of Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford; Corresponding Member of the Imperial Academy of Sciences of St. Petersburg, and of the Academy of Sciences of Philadelphia; Foreign Member of the Royal Bohemian Society of Sciences.*

WITH THE CO-OPERATION OF

ADAM SEDGWICK, M.A., F.R.S.,

*Fellow and Lecturer of Trinity College, Cambridge;*

AND

W. F. R. WELDON, M.A., F.R.S.,

*Judrell Professor of Zoology and Comparative Anatomy in University College, London; late Fellow of St. John's College, Cambridge.*

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON :

J. & A. CHURCHILL, 7, GREAT MARLBOROUGH STREET.

1896.

CONTENTS OF No. 153.—New Series.

**MEMOIRS:**

|                                                                                                                                                                                                                                                         | PAGE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| The Blood of Magelona. By W. BLAXLAND BENHAM, D.Sc.Lond.,<br>Hon.M.A.Oxon., Aldrichian Demonstrator in Comparative Anatomy<br>in the University of Oxford. (With Plate 1) . . . . .                                                                     | 1    |
| Fission in Nemertines. By W. BLAXLAND BENHAM, D.Sc.Lond.,<br>Hon.M.A.Oxon., Aldrichian Demonstrator in Comparative Anatomy<br>in the University of Oxford. (With Plates 2 and 3) . . . . .                                                              | 19   |
| Studies on the Nervous System of Crustacea. By EDGAR J. ALLEN,<br>B.Sc., Director of the Plymouth Laboratory of the Marine Biolo-<br>gical Association. (With Plate 4) . . . . .                                                                        | 33   |
| Notes on Oligochætes, with the Description of a New Species. By<br>EDWIN S. GOODRICH, B.A., Assistant to the Linacre Professor of<br>Comparative Anatomy, Oxford. (With Plates 5 and 6) . . . . .                                                       | 51   |
| On the Development of <i>Lichenopora verrucaria</i> , Fabr. By<br>SIDNEY F. HARMER, M.A., B.Sc., Fellow of King's College, Cam-<br>bridge; Superintendent of the University Museum of Zoology.<br>(With Plates 7—10, and two figures in text) . . . . . | 71   |

SEP 26 1896

New Series, No. 154 (Vol. 39, Part 2).

Price 10s.

7527

AUGUST, 1896.

THE

# QUARTERLY JOURNAL

OF

# MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

*Linacre Professor of Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford; Corresponding Member of the Imperial Academy of Sciences of St. Petersburg, and of the Academy of Sciences of Philadelphia; Foreign Member of the Royal Bohemian Society of Sciences.*

WITH THE CO-OPERATION OF

ADAM SEDGWICK, M.A., F.R.S.,

*Fellow and Lecturer of Trinity College, Cambridge;*

AND

W. F. R. WELDON, M.A., F.R.S.,

*Jodrell Professor of Zoology and Comparative Anatomy in University College, London; late Fellow of St. John's College, Cambridge.*

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON :

J. & A. CHURCHILL, 7, GREAT MARLBOROUGH STREET.

1896.

CONTENTS OF No. 154.—New Series.

MEMOIRS:

|                                                                                                                                                                                                                                             | PAGE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Letters from New Guinea on Nautilus and some other Organisms.<br>By ARTHUR WILLEY, D.Sc.                                                                                                                                                    | 145  |
| The Brain of a Fœtal Ornithorhynchus. Part I.—The Fore-brain.<br>By G. ELLIOT SMITH, M.D., Ch.M., Demonstrator of Anatomy,<br>University of Sydney, N.S.W. (With Plate 11)                                                                  | 181  |
| On <i>Arhynchus hemignathus</i> , a New Genus of Acanthocephala. By<br>ARTHUR E. SHIPLEY, Fellow and Tutor of Christ's College, Cam-<br>bridge, and University Lecturer in the Advanced Morphology of<br>the Invertebrata. (With Plate 12). | 207  |
| Zoological Observations in the South Pacific. By ARTHUR WILLEY,<br>D.Sc.Lond., Balfour Student of the University of Cambridge. (With<br>Plate 13)                                                                                           | 219  |
| Chlamydomyxa montana, n. sp., one of the Protozoa Gymno-<br>myxa. By E. RAY LANKESTER, M.A., LL.D., F.R.S., Linacre<br>Professor in the University of Oxford. (With Plates 14 and 15).                                                      | 233  |

New Series, No. 155 (Vol. 39, Part 3).

Price 10s.

NOVEMBER, 1896.

JAN 4 1897

7524  
THE  
QUARTERLY JOURNAL

OF

MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

*Linacre Professor of Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford; Corresponding Member of the Imperial Academy of Sciences of St. Petersburg, and of the Academy of Sciences of Philadelphia; Foreign Member of the Royal Bohemian Society of Sciences.*

WITH THE CO-OPERATION OF

ADAM SEDGWICK, M.A., F.R.S.,

*Fellow and Lecturer of Trinity College, Cambridge;*

AND

W. F. R. WELDON, M.A., F.R.S.,

*Jodrell Professor of Zoology and Comparative Anatomy in University College, London; late Fellow of St. John's College, Cambridge.*

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON :

J. & A. CHURCHILL, 7, GREAT MARLBOROUGH STREET.

1896.

CONTENTS OF No. 155.—New Series.

---

MEMOIRS:

|                                                                                                                                                                                                                                                                                              | PAGE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| The Constitution and Development of the Society of Termites: Observations on their Habits; with Appendices on the Parasitic Protozoa of Termiticæ, and on the Embiidæ. By Professor B. GRASSI in collaboration with Dr. A. SANDIAS. (With Plates 16—20) ( <i>to be continued</i> ) . . . . . | 245  |
| On Ctenoplana. By ARTHUR WILLEY, D.Sc. (With Plate 21) . . . . .                                                                                                                                                                                                                             | 323  |
| An Attempt to deduce the Vertebrate Eyes from the Skin. By H. M. BERNARD, M.A.Cantab., F.L.S. (With Plate 22) . . . . .                                                                                                                                                                      | 343  |
| The Reproduction and Metamorphosis of the Common Eel ( <i>Anguilla vulgaris</i> ). By Professor GRASSI . . . . .                                                                                                                                                                             | 371  |

New Series, No. 156 (Vol. 39, Part 4).

Price 10s.

JANUARY, 1897.

FEB 16 1897

THE

QUARTERLY JOURNAL

7527

OF

MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

*Linacre Professor of Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford; Corresponding Member of the Imperial Academy of Sciences of St. Petersburg, and of the Academy of Sciences of Philadelphia; Foreign Member of the Royal Bohemian Society of Sciences.*

WITH THE CO-OPERATION OF

ADAM SEDGWICK, M.A., F.R.S.,

*Fellow and Lecturer of Trinity College, Cambridge;*

AND

W. F. R. WELDON, M.A., F.R.S.,

*Goddrell Professor of Zoology and Comparative Anatomy in University College, London; late Fellow of St. John's College, Cambridge.*

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON :

J. & A. CHURCHILL, 7, GREAT MARLBOROUGH STREET.

1897.

## CONTENTS OF No. 156.—New Series.

---

### **MEMOIRS:**

|                                                                                                                                                                                                                                                                                                                                                                  | PAGE |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Changes in the Cell-organs of <i>Drosera rotundifolia</i> , produced by Feeding with Egg-albumen. By LILY HUIE, Physiological Laboratory, Oxford. (With Plates 23 and 24) . . . . .                                                                                                                                                                              | 387  |
| Observations upon the Development and Succession of the Teeth in <i>Perameles</i> ; together with a Contribution to the Discussion of the Homologies of the Teeth in Marsupial Animals. By J. T. WILSON, M.B., Professor of Anatomy, and J. P. HILL, F.L.S., Demonstrator of Biology in the University of Sydney, New South Wales. (With Plates 25—32) . . . . . | 427  |

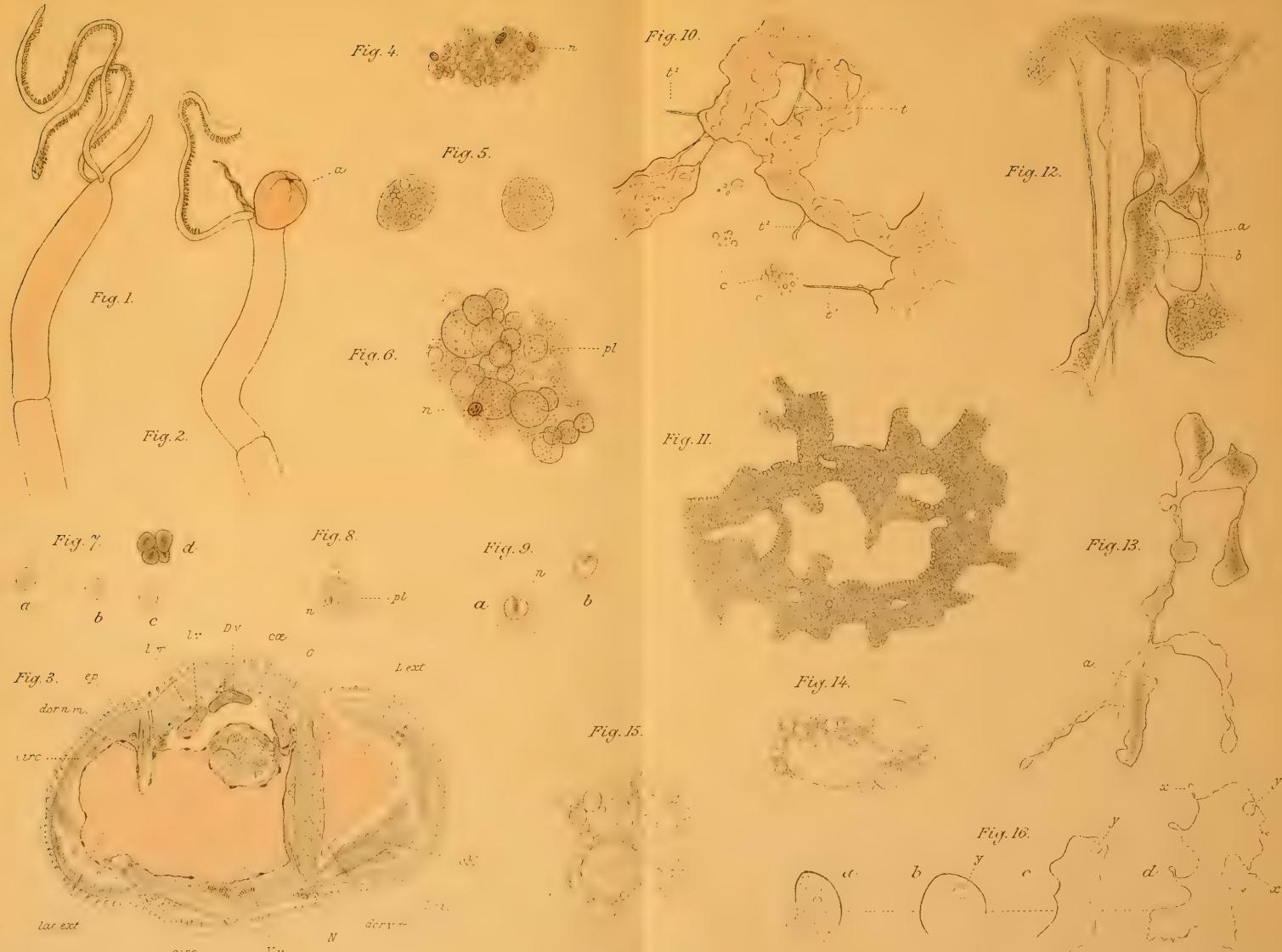








Fig. 3.

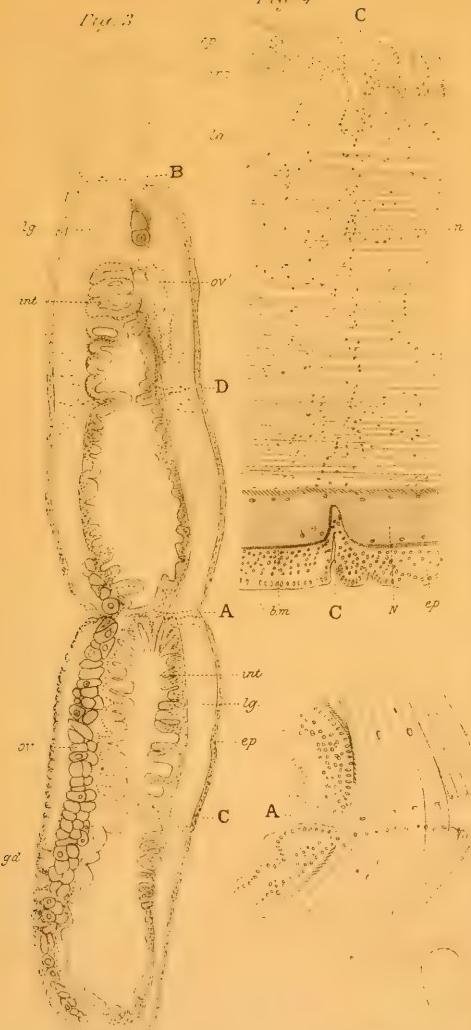


Fig. 4.

**C**

Fig. 5.

**D**

Fig. 6.

**A**

Fig. 7.

**B**

Fig. 9.

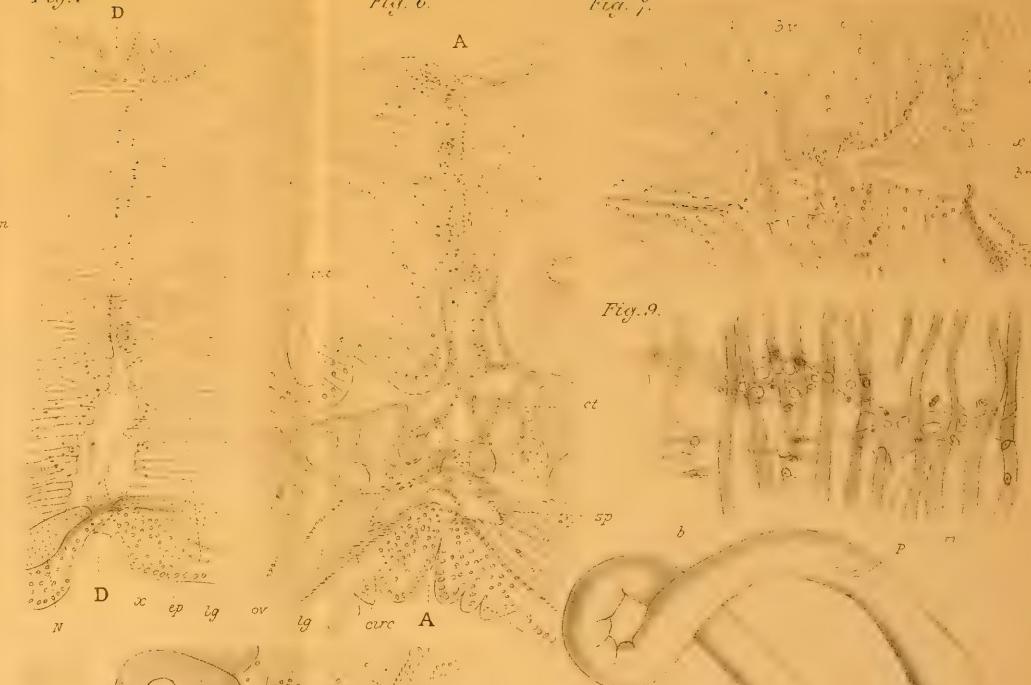


Fig. 8.



Fig. 2.

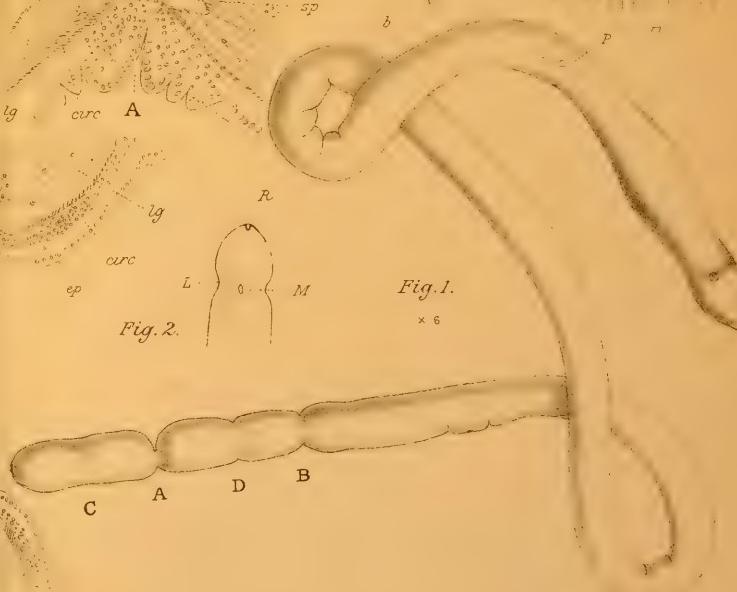
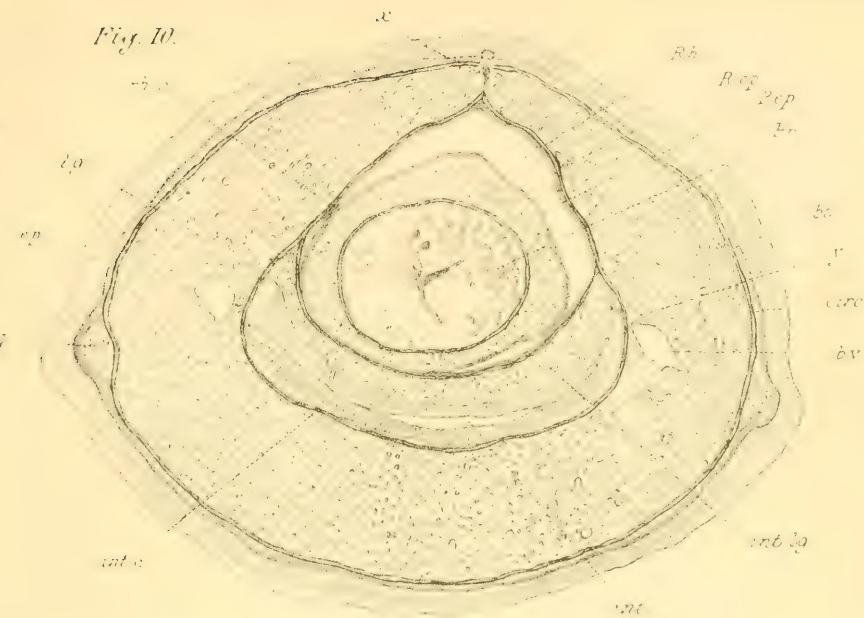


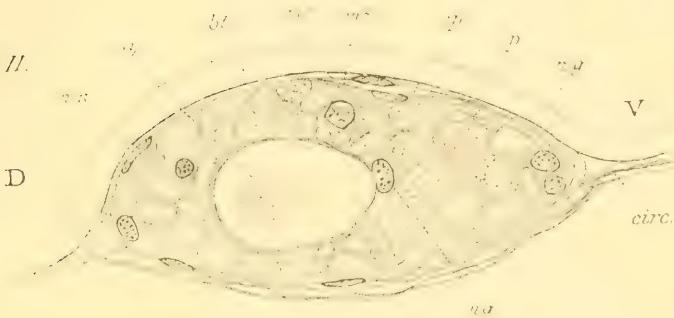
Fig. 1.



*Fig. 10.*



*Fig. 11.*



*Fig. 12.*

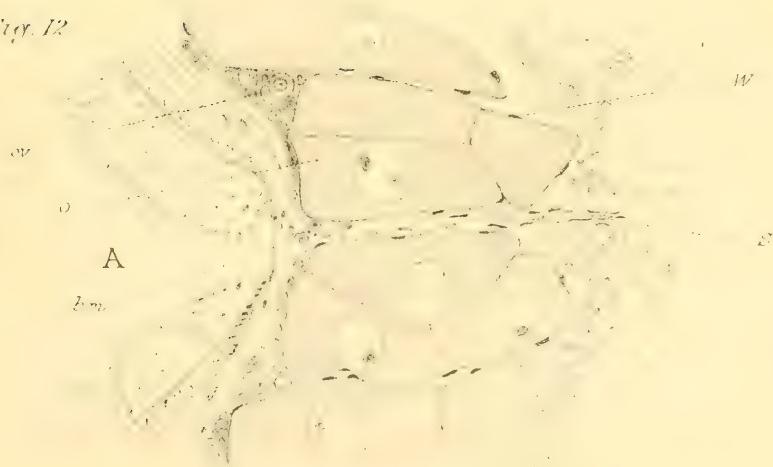








Fig. 1.

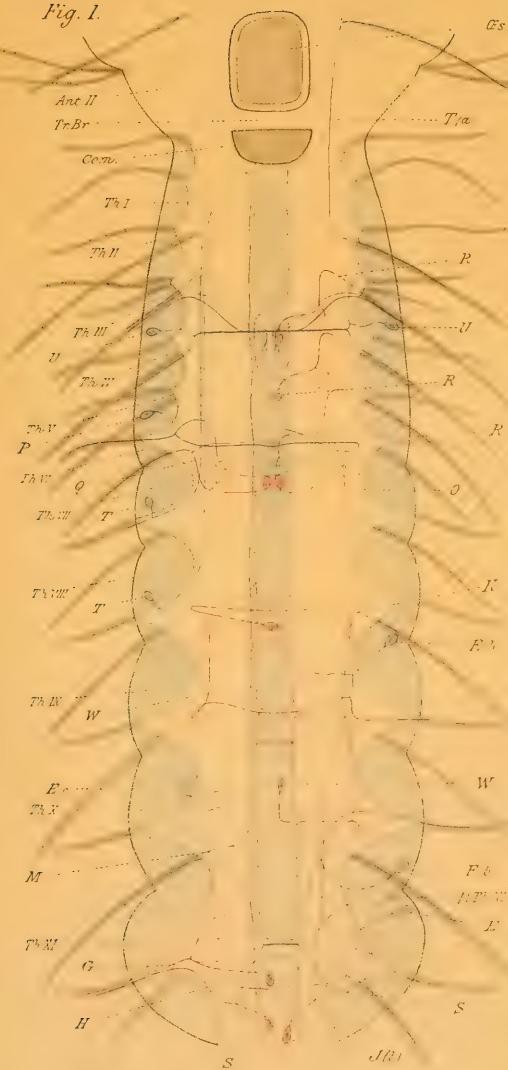


Fig. 5.

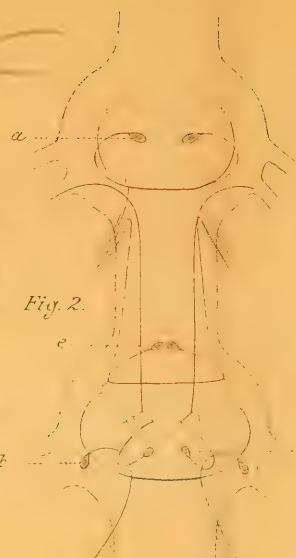


Fig. 2.

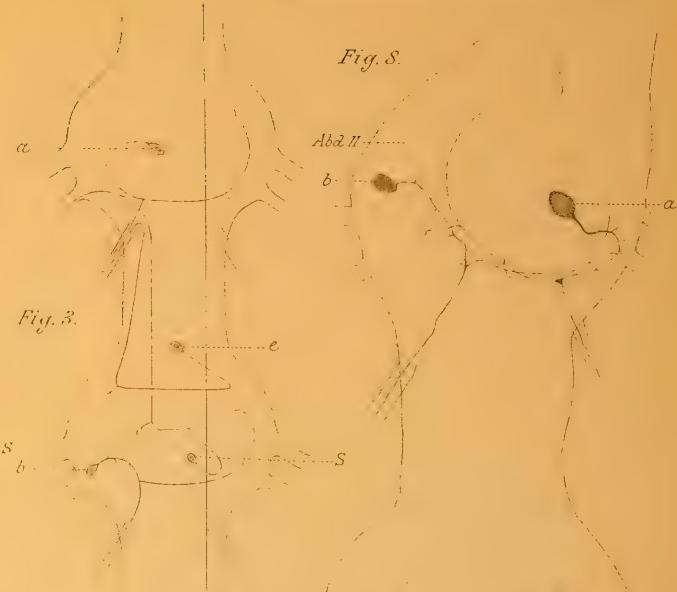


Fig. 3.

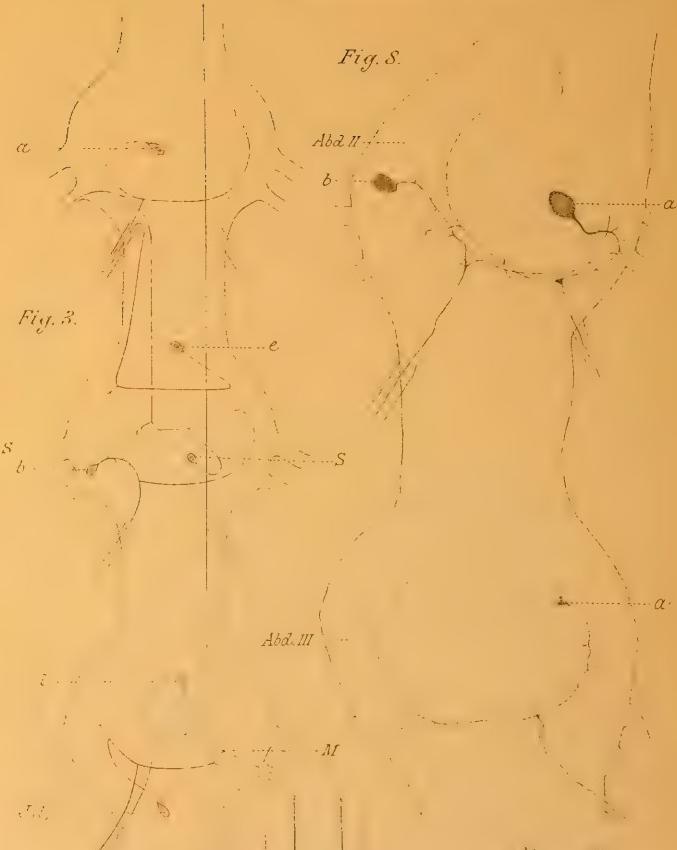


Fig. 4.

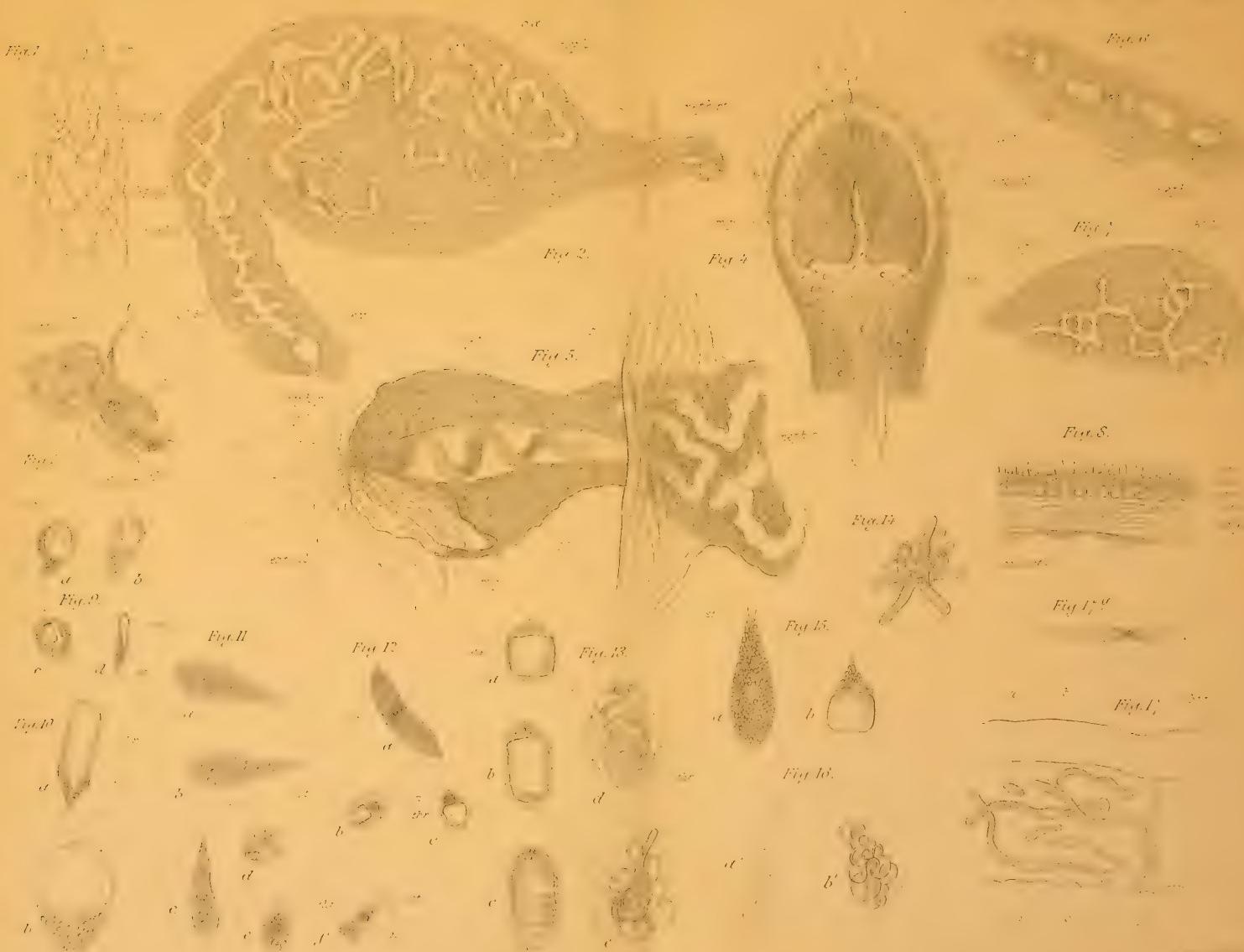


Fig. 6.















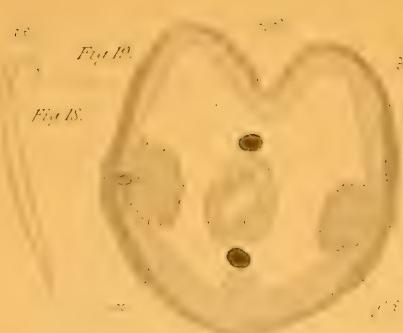


Fig. 19.

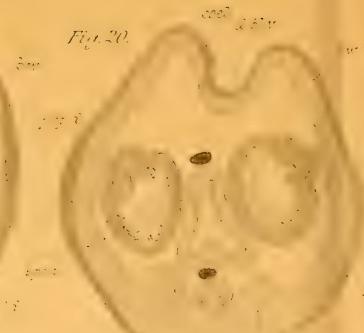


Fig. 20.

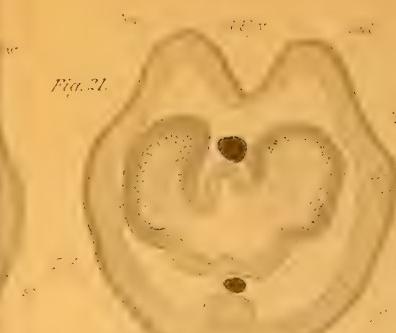


Fig. 21.

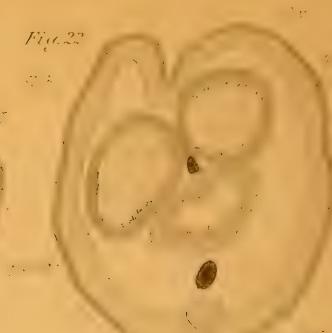


Fig. 22.

Fig. 23.

Fig. 24.



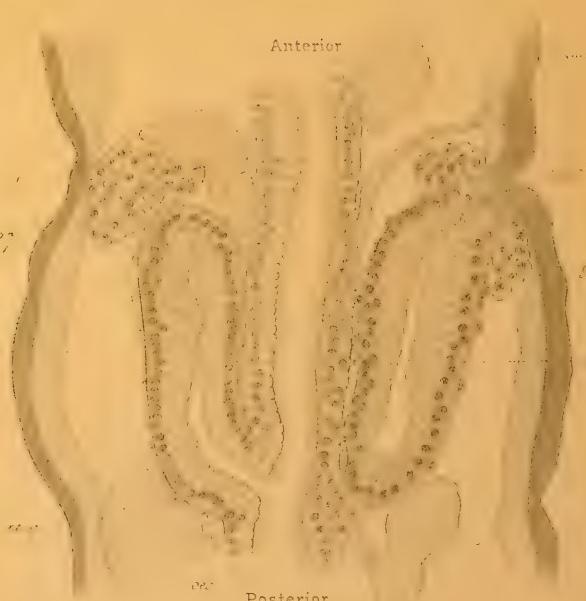
Fig. 25.

Fig. 26.



Fig. 27.

Fig. 28.



Posterior









Fig. 1.

Fig. 2.

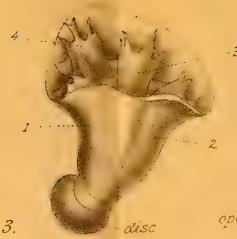


Fig. 3.

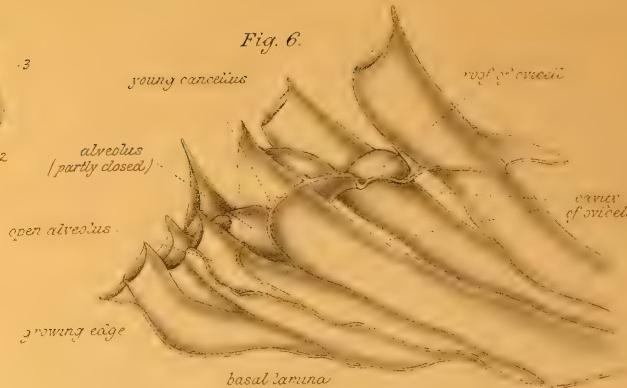


Fig. 6.

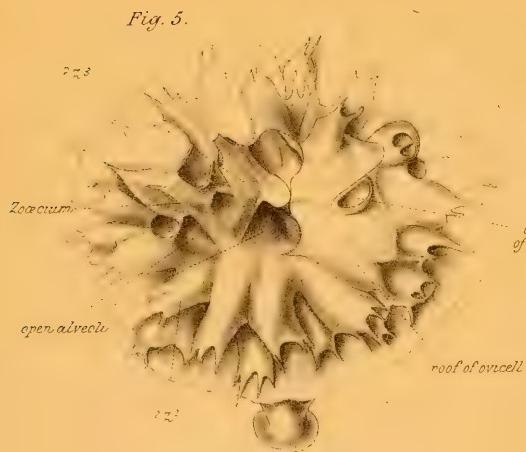


Fig. 5.

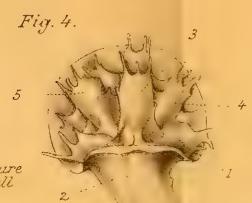


Fig. 4.



Fig. 7.

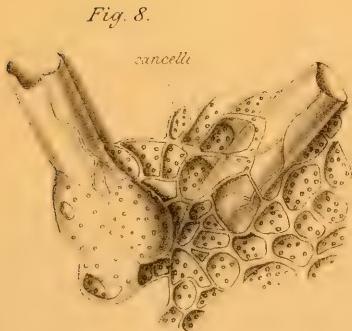


Fig. 8.

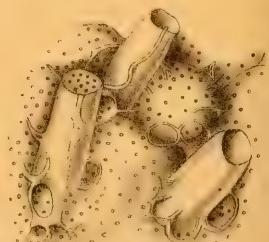


Fig. 9.







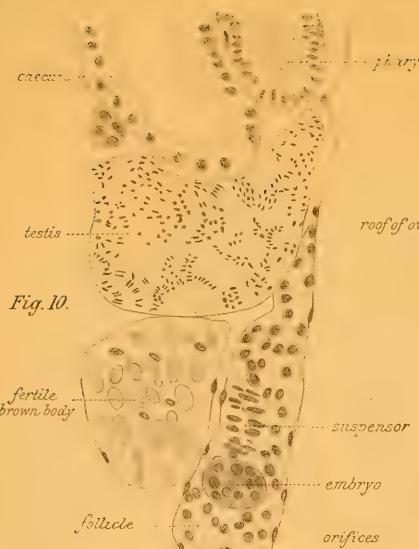


Fig. 10.

Fig. 11.

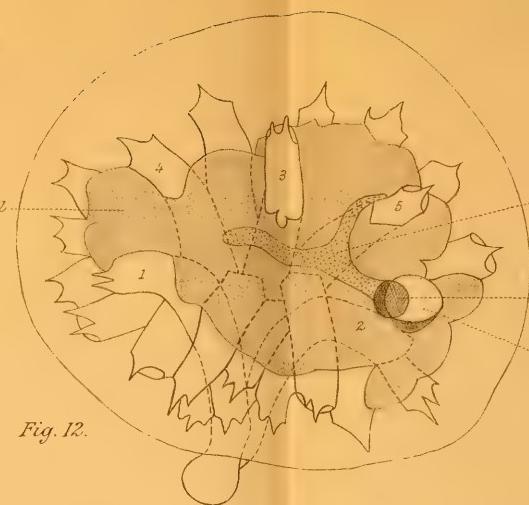


Fig. 12.

Fig. 13.

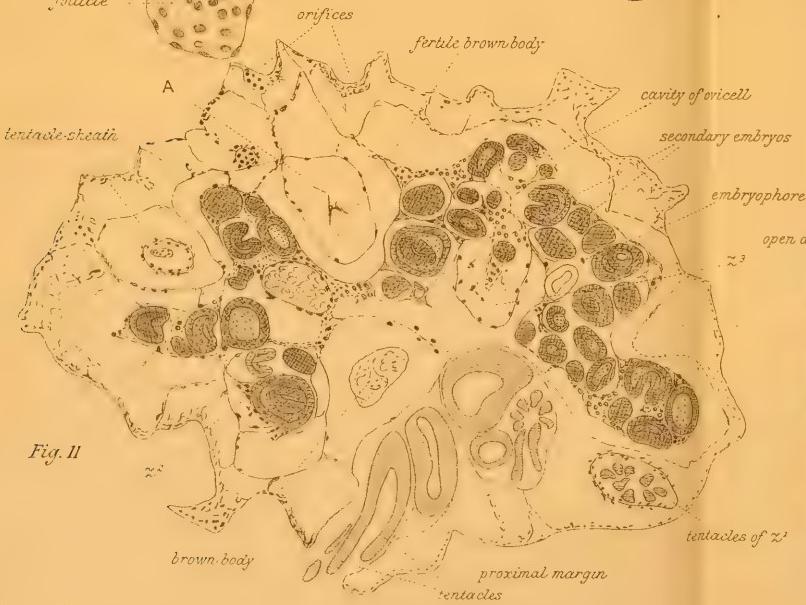
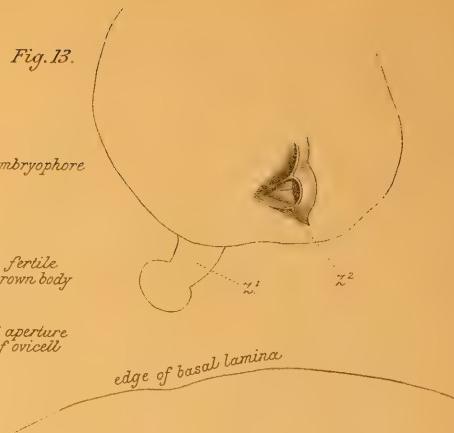
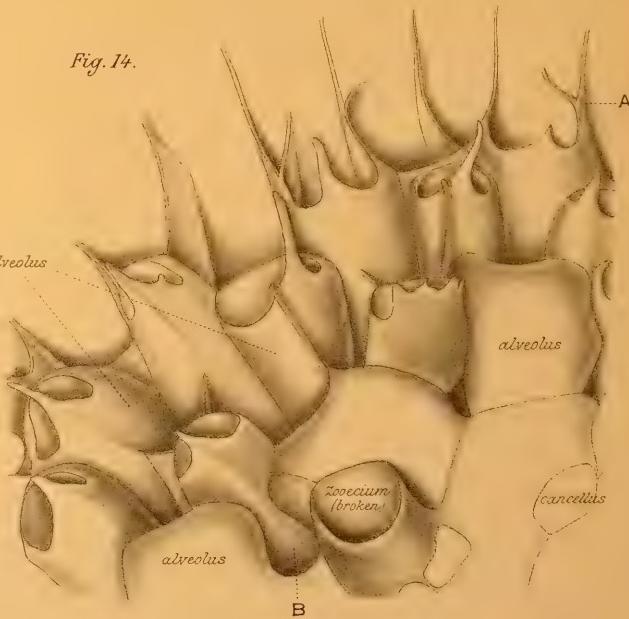


Fig. 11.

Fig. 14.









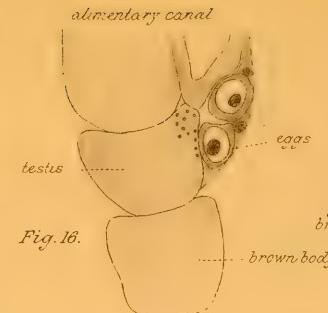


Fig. 15.

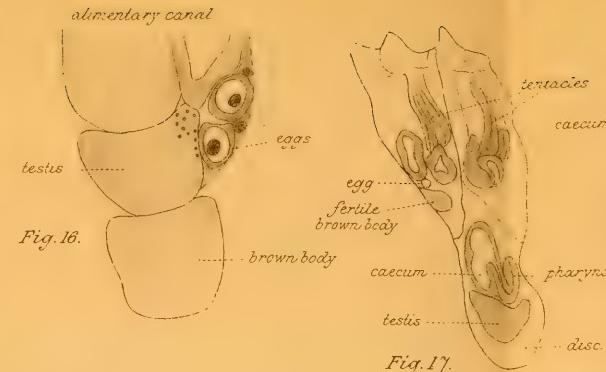


Fig. 17.

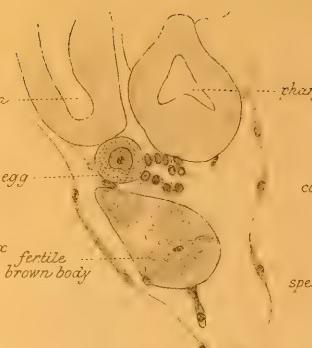


Fig. 18.

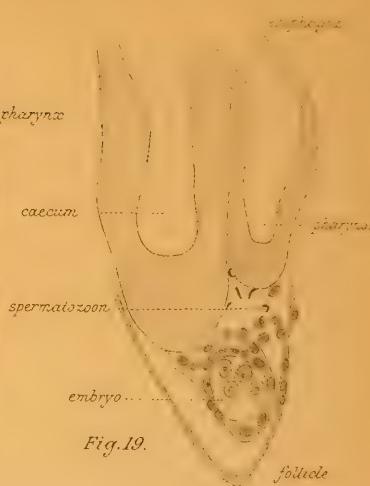


Fig. 19.

Fig. 21.



Fig. 20.

Fig. 22.



Fig. 23.

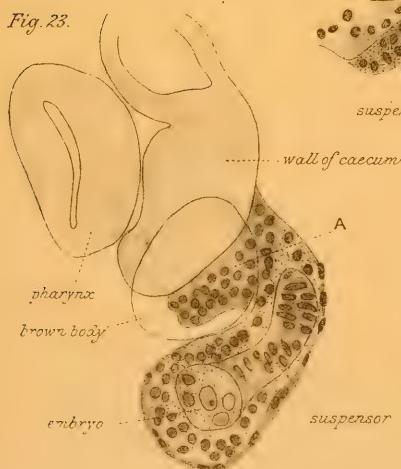


Fig. 24.

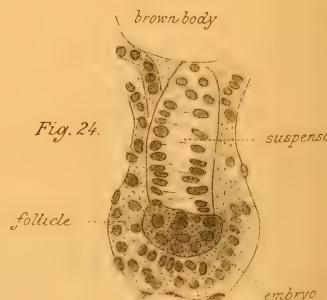


Fig. 26.



Fig. 25.



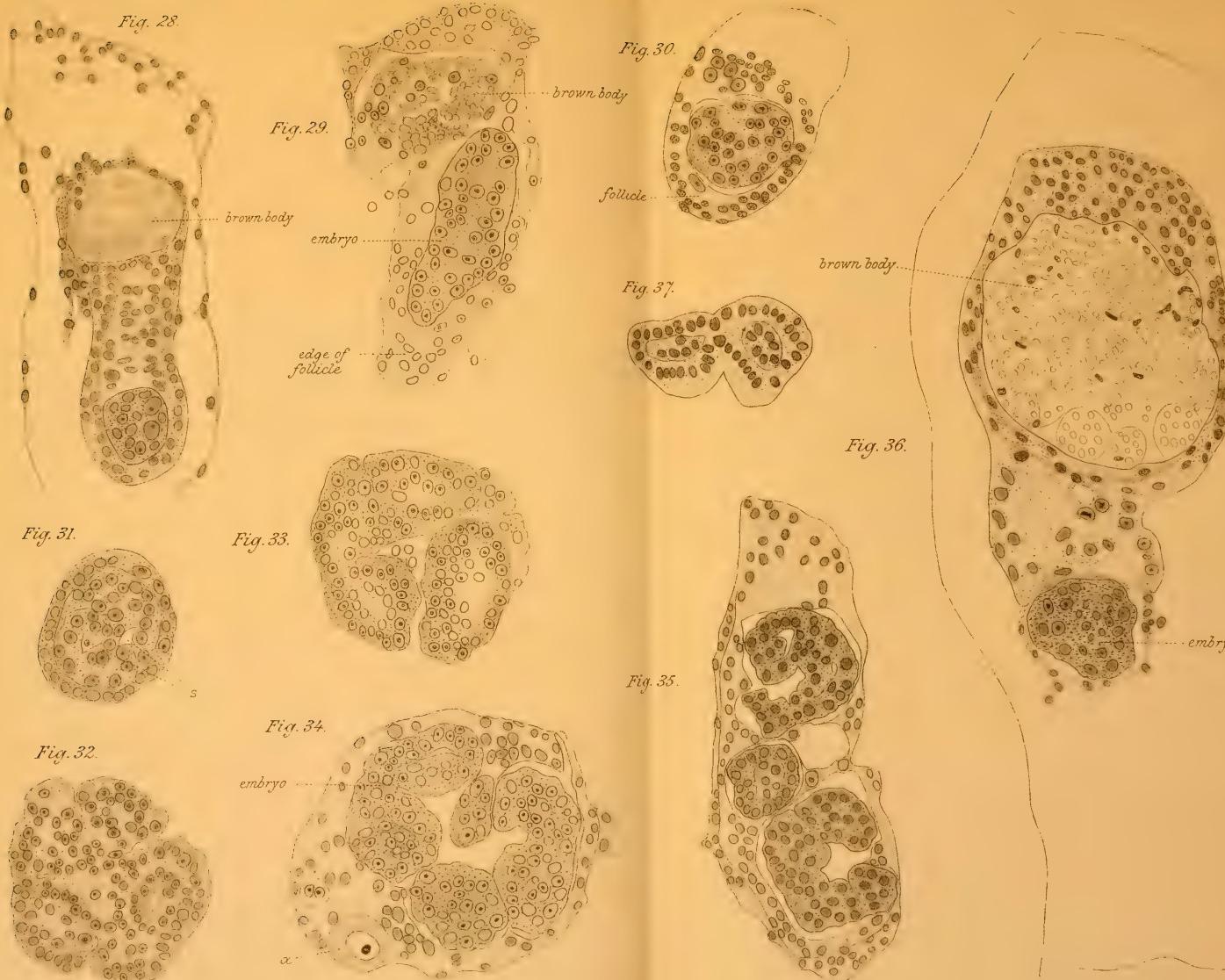
Fig. 27.







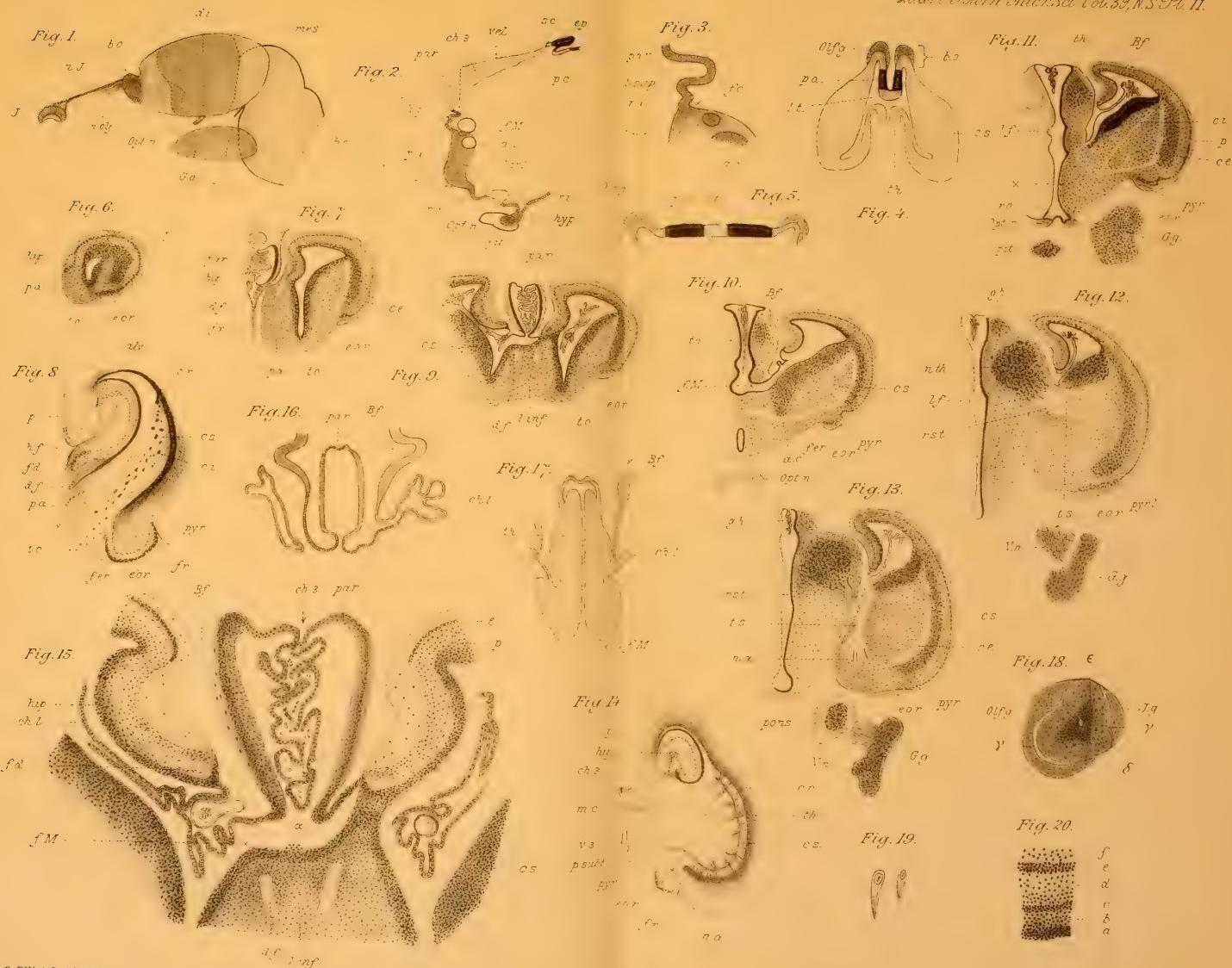








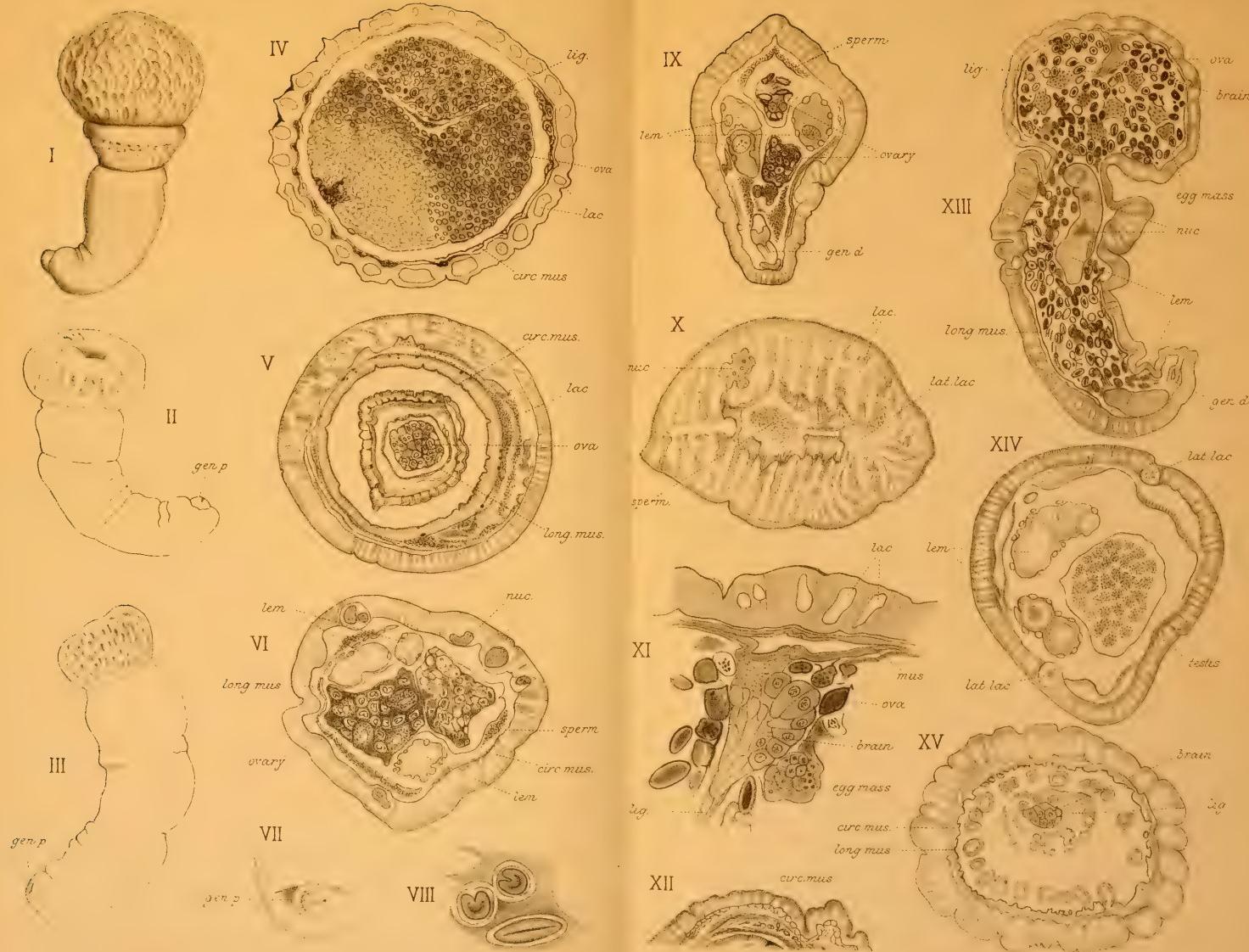












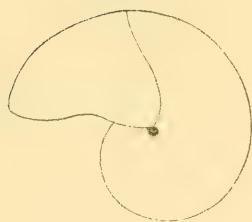




*Fig. 5.*



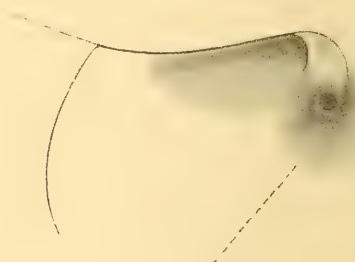
*Fig. 6.*



*Fig. 8.*

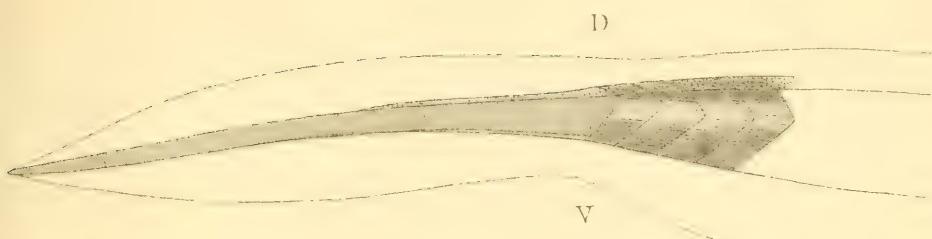


*Fig. 7.*



*Fig. 9.*





*Fig. 1.*



*Fig. 2.*

*Fig. 4.*



*Fig. 3.*







Fig. 1.

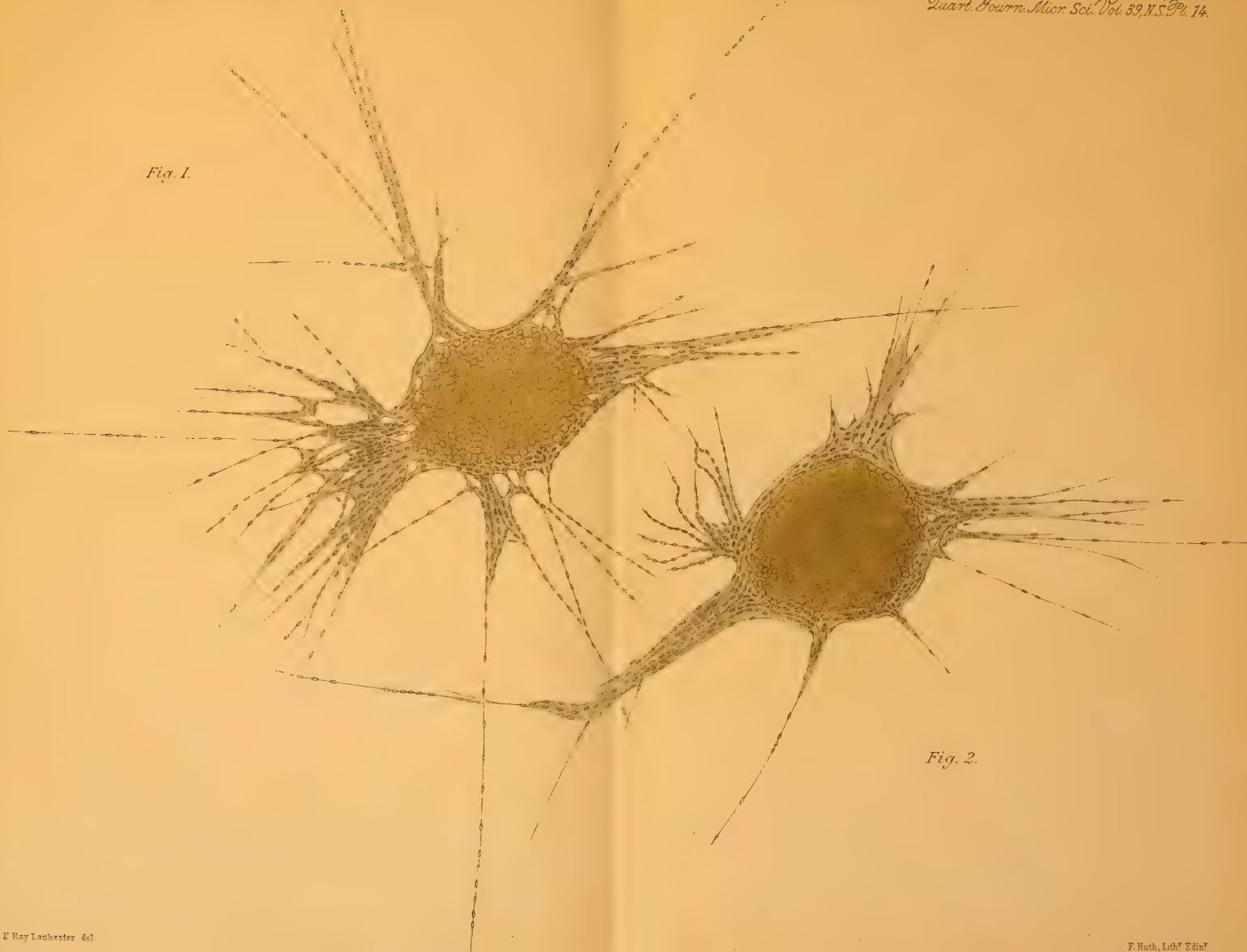


Fig. 2.









Fig. 6.

Fig. 8.

Fig. 7.

Fig. 10.

Fig. 5.

Fig. 3.

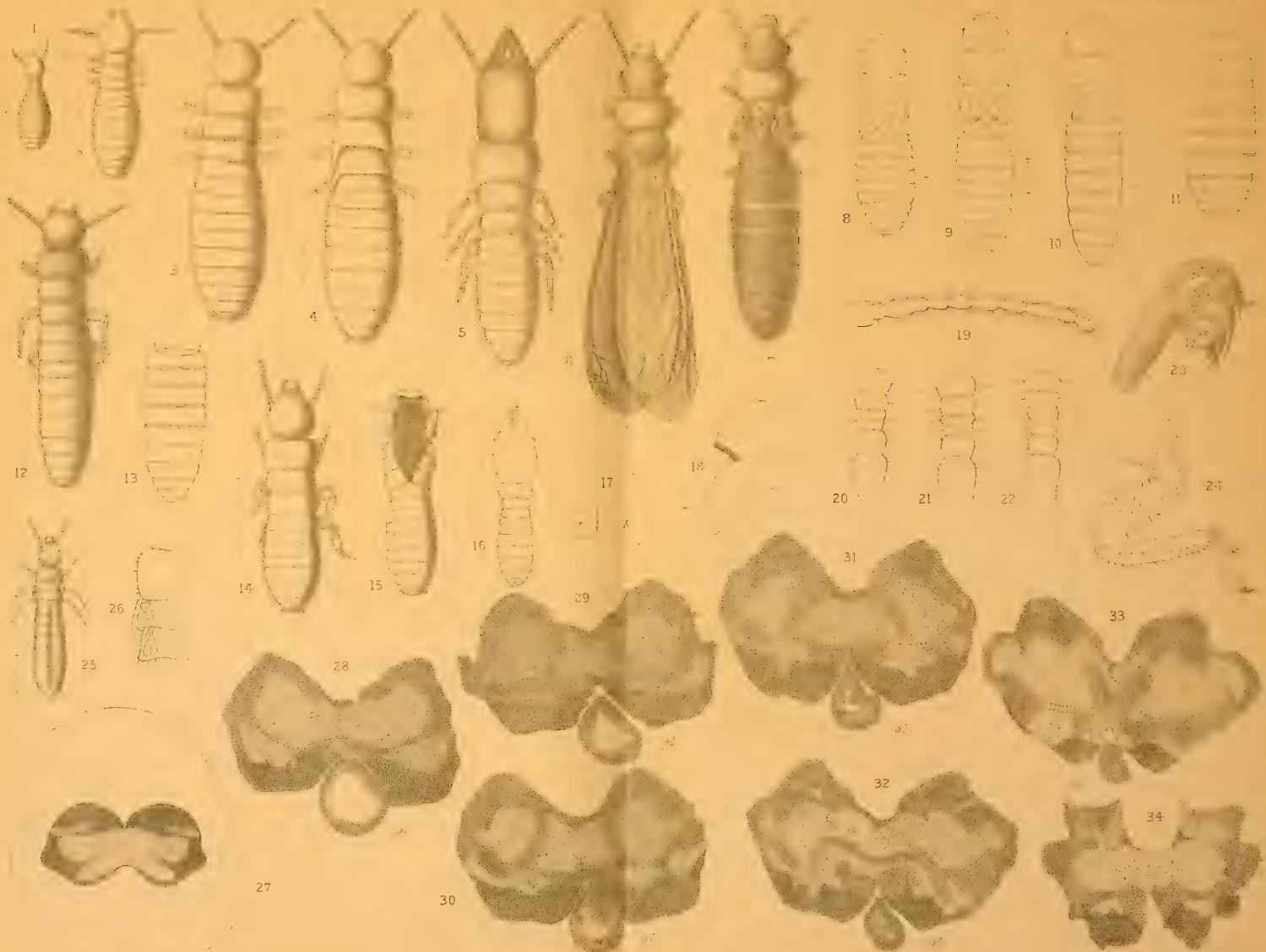
Fig. 4.

Fig. 9.





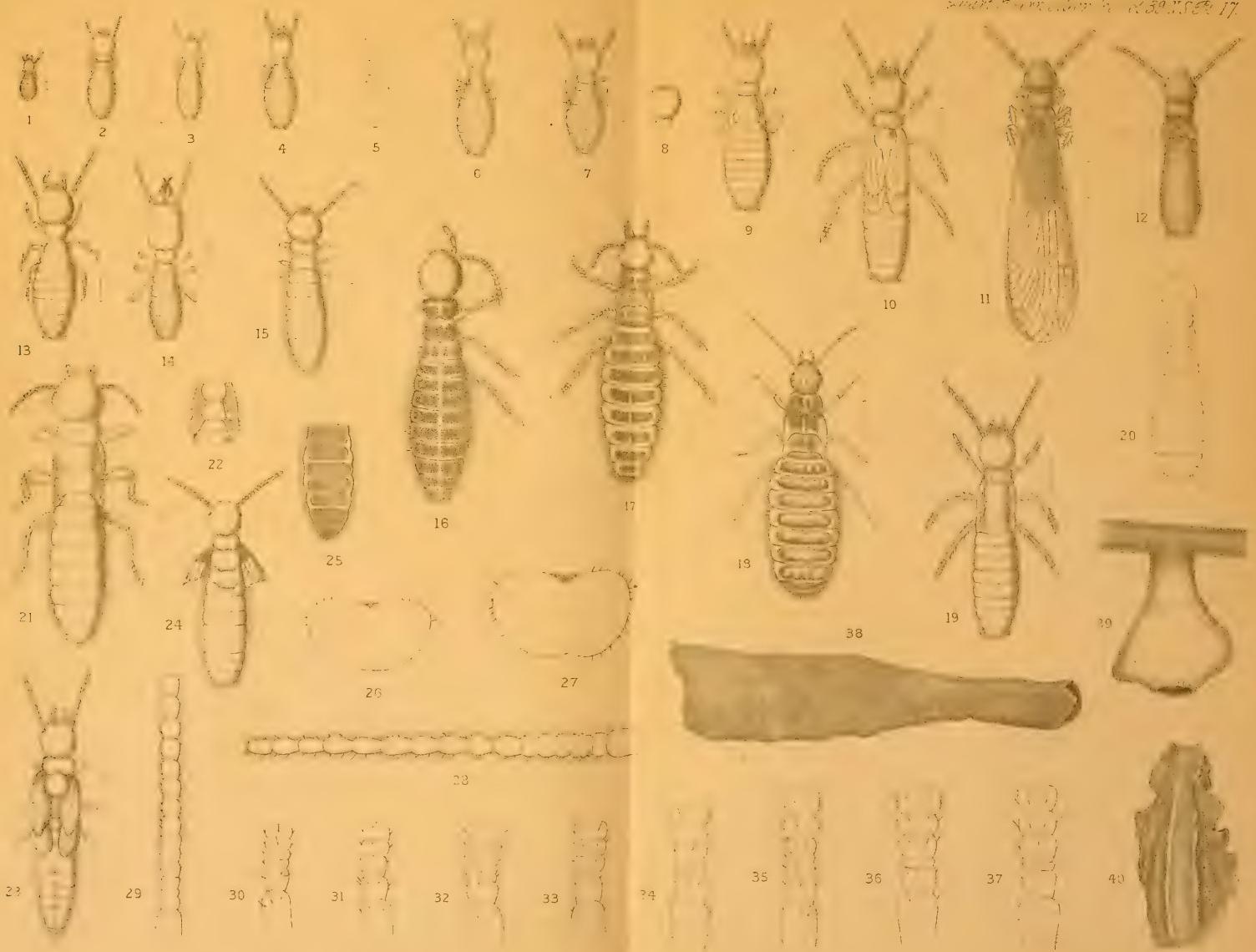
















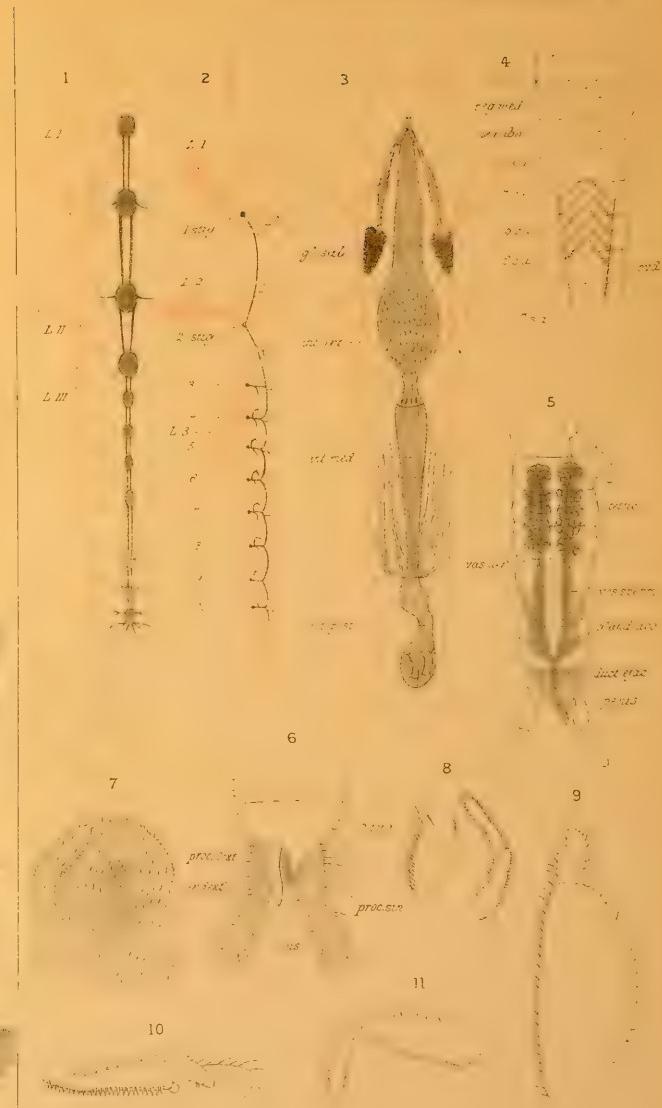


















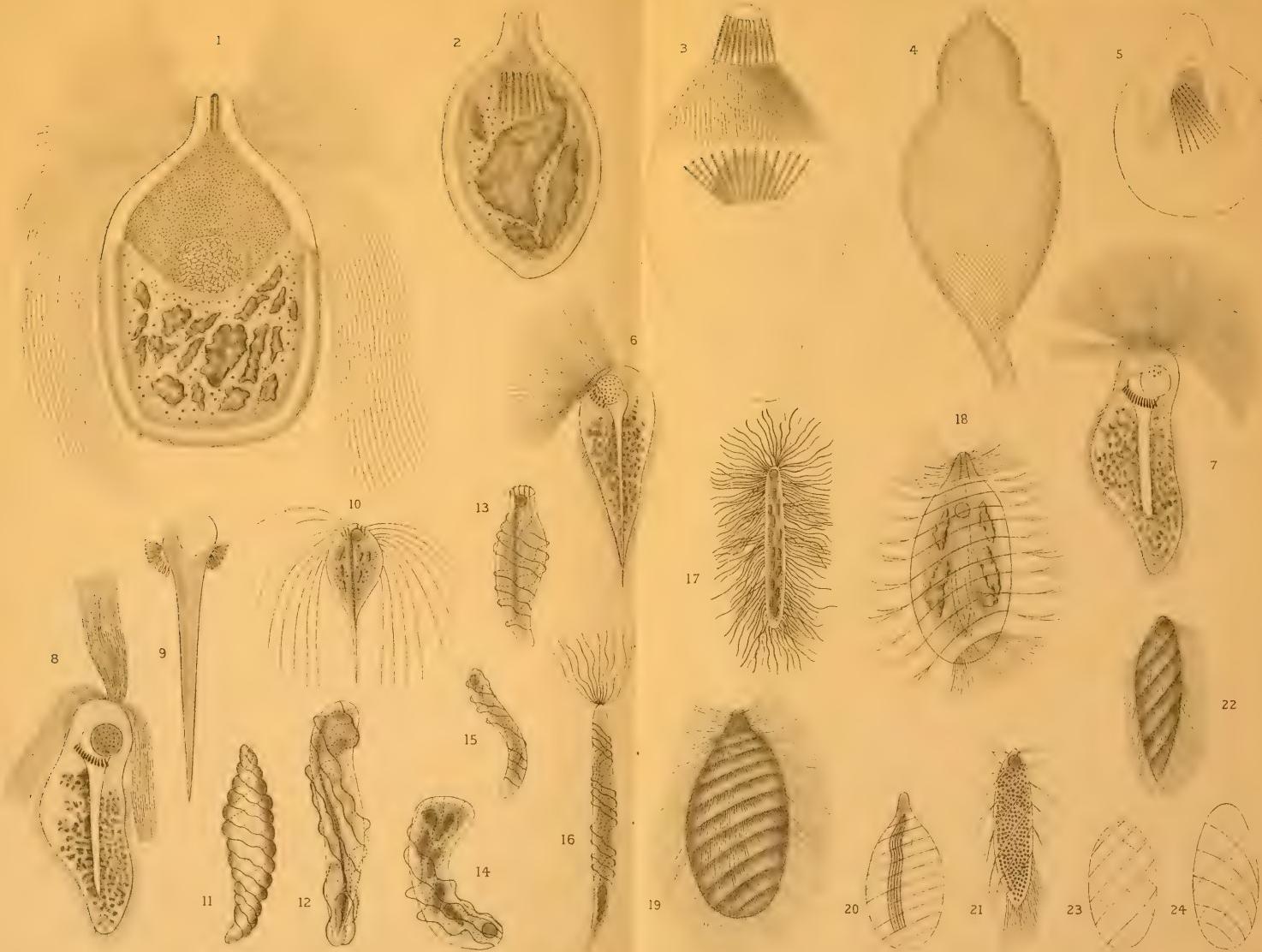








Fig. 1.

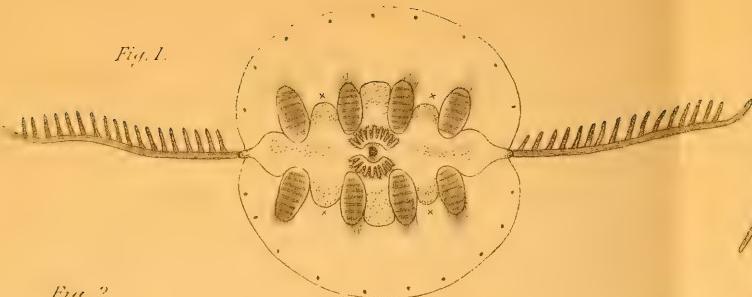


Fig. 4.

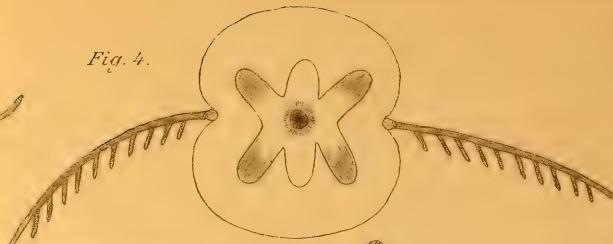


Fig. 2.

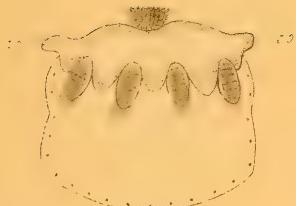


Fig. 3.

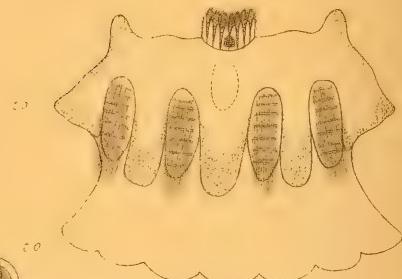


Fig. 6.

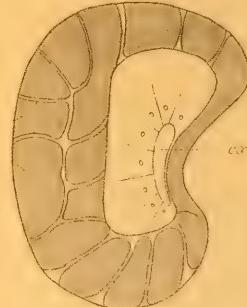


Fig. 9.

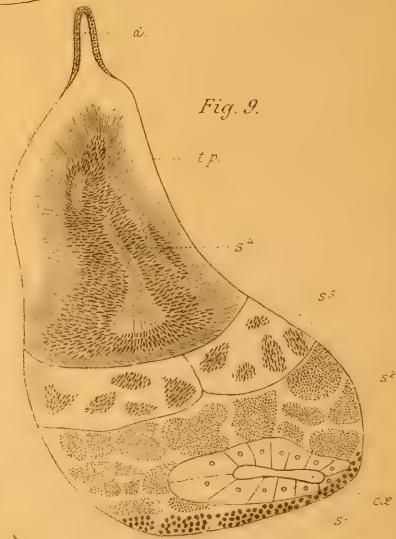


Fig. 5.

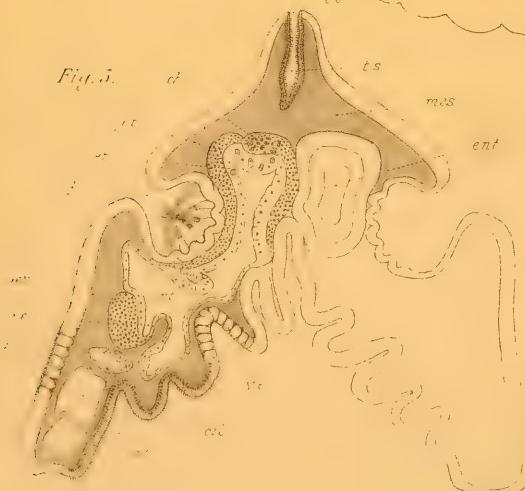


Fig. 8.



Fig. 7.



Fig. 10.

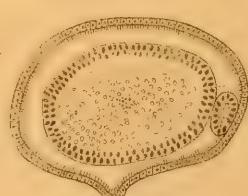
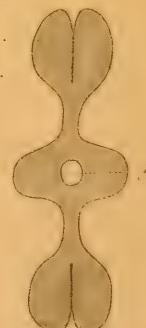
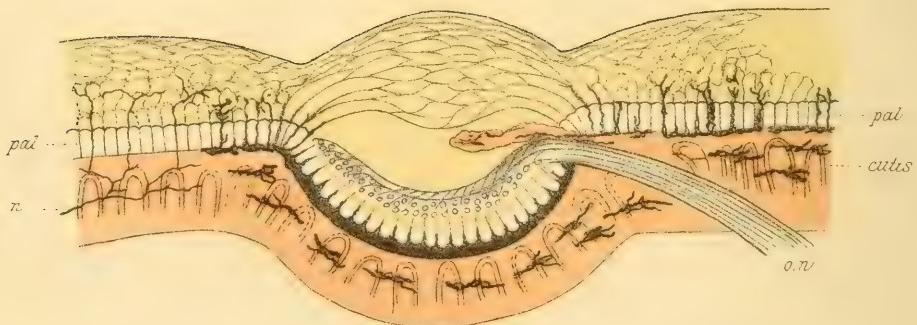
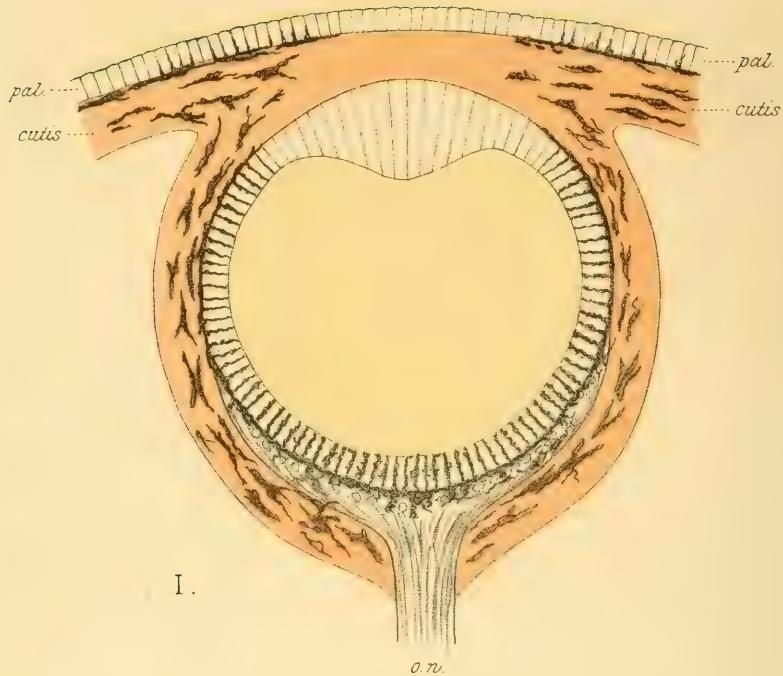


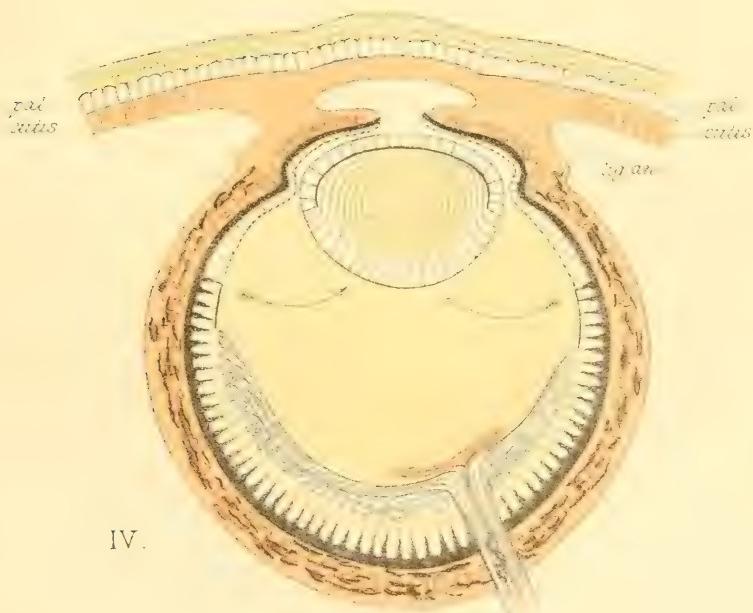
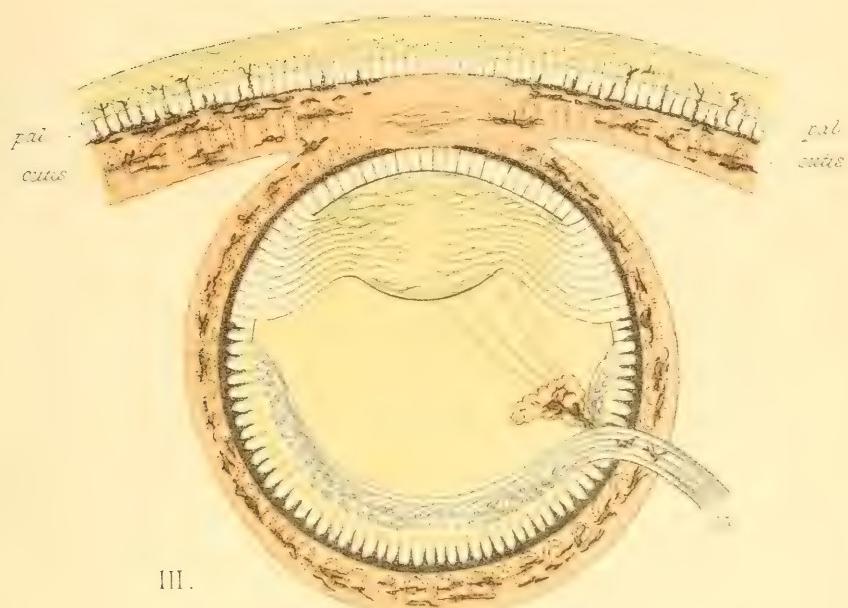
Fig. 11.

















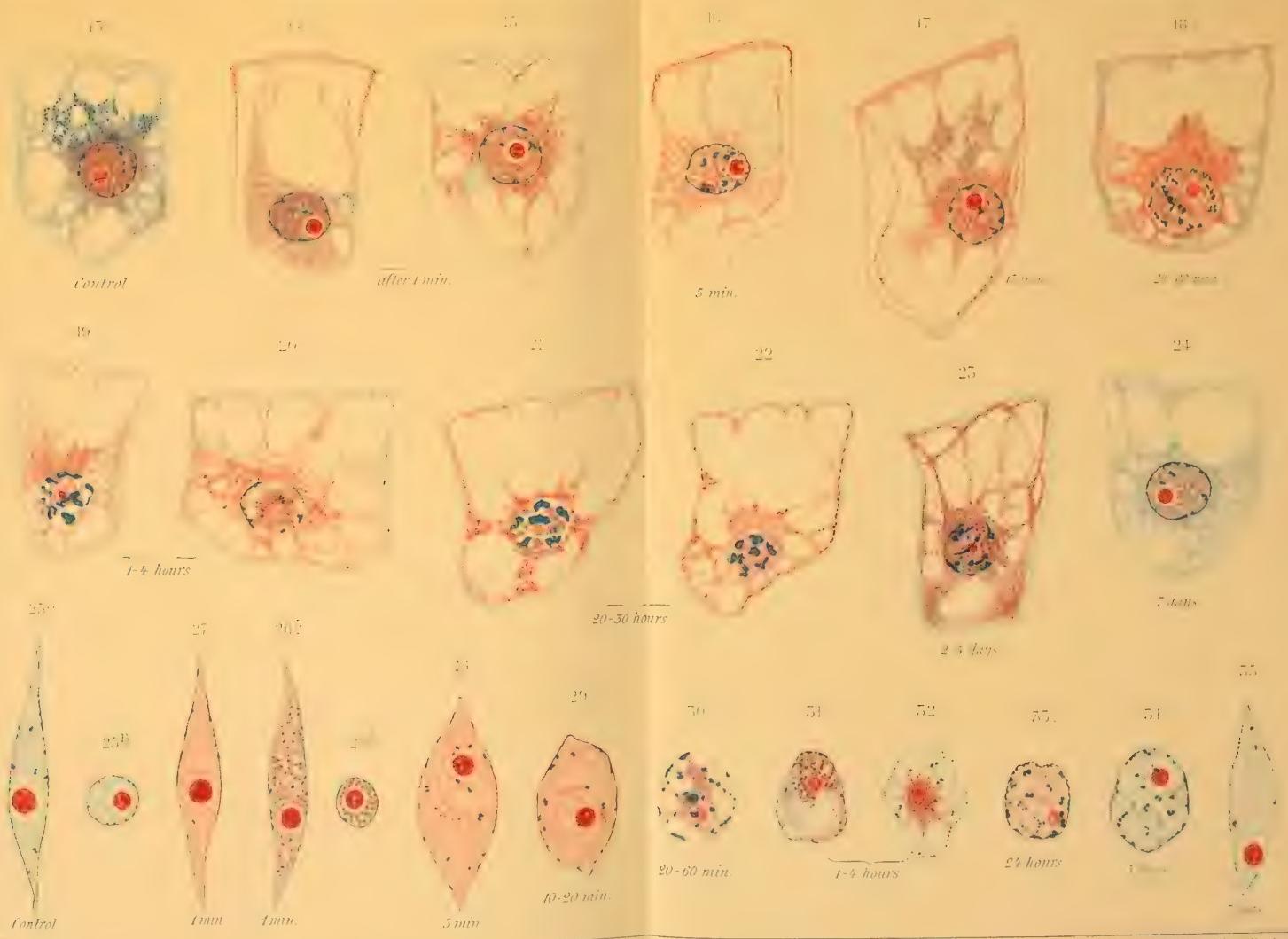


HUIK: CHANGES IN DROSERA AFTER FEEDING.









K. H. Müller

Dr. M. Winter &amp; Sohn, Frankfurt/M.

HUIKE: CHANGES IN DROSOPHILA AFTER FEEDING.















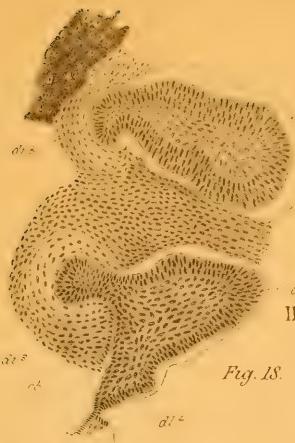


Fig. 19.

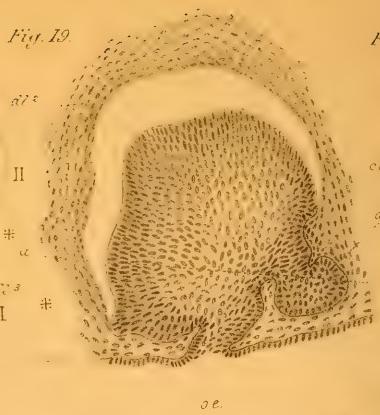


Fig. 20.



Fig. 21.

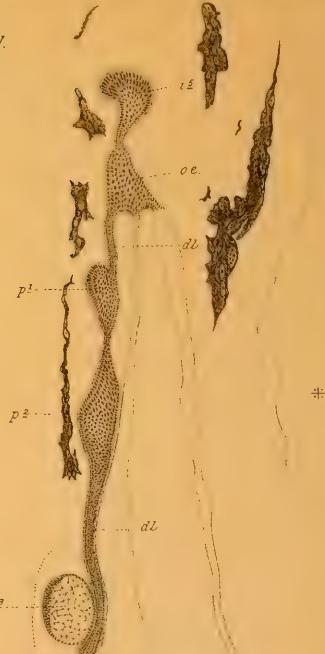


Fig. 25

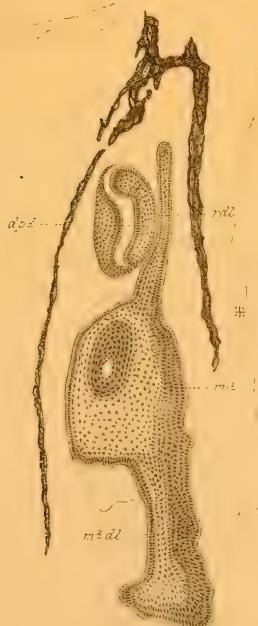


Fig. 22.

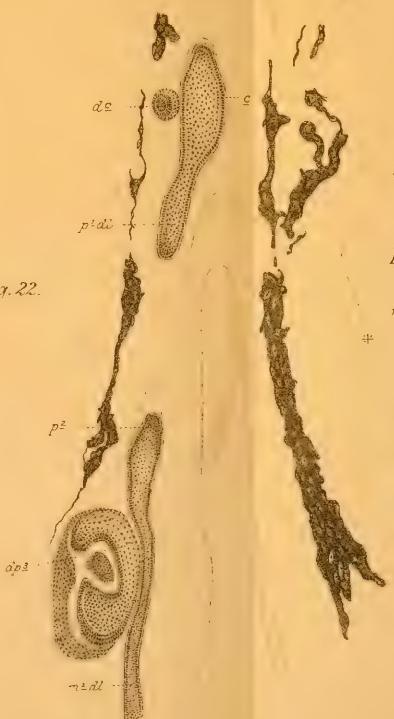


Fig. 24.

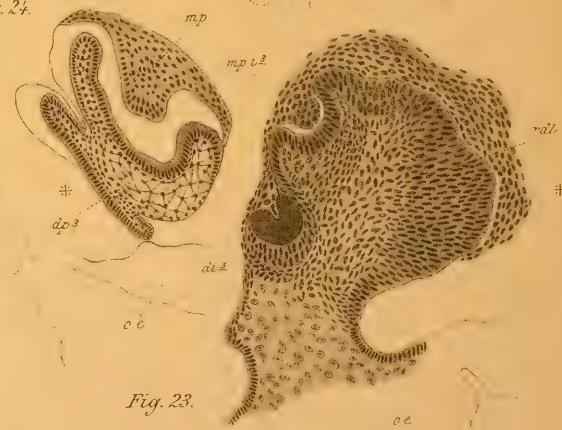


Fig. 23.







Fig. 26.



Fig. 27.

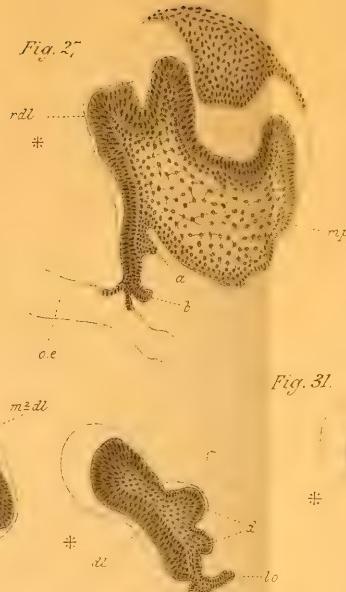


Fig. 28.

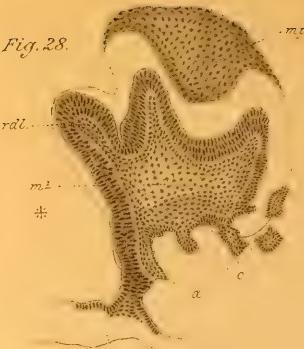


Fig. 29.

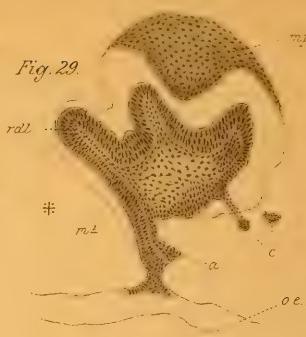


Fig. 31.

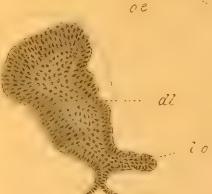


Fig. 32.

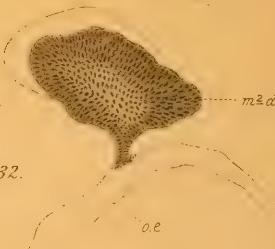


Fig. 33.

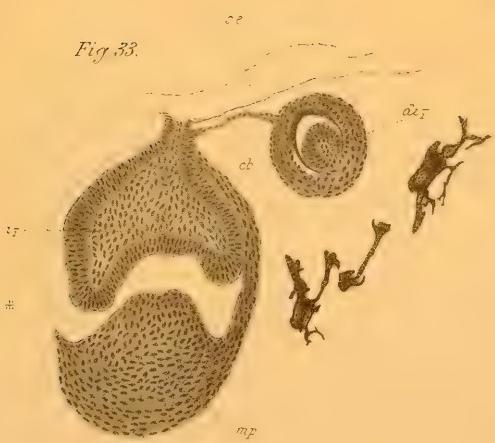


Fig. 34.

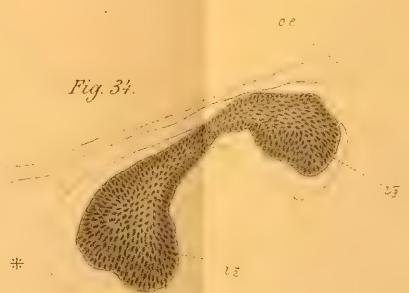


Fig. 35.









Fig. 36.



Fig. 37.

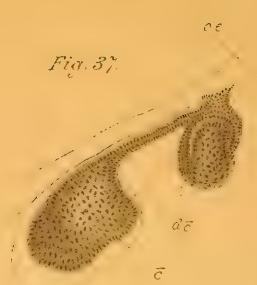


Fig. 38.



Fig. 39.



Fig. 42.



Fig. 44.

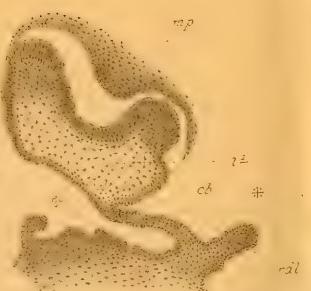


Fig. 43.



Fig. 40.



Fig. 41.

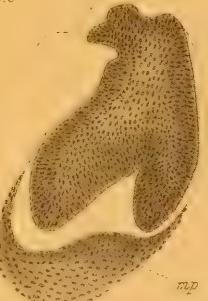
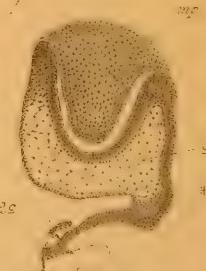


Fig. 45.



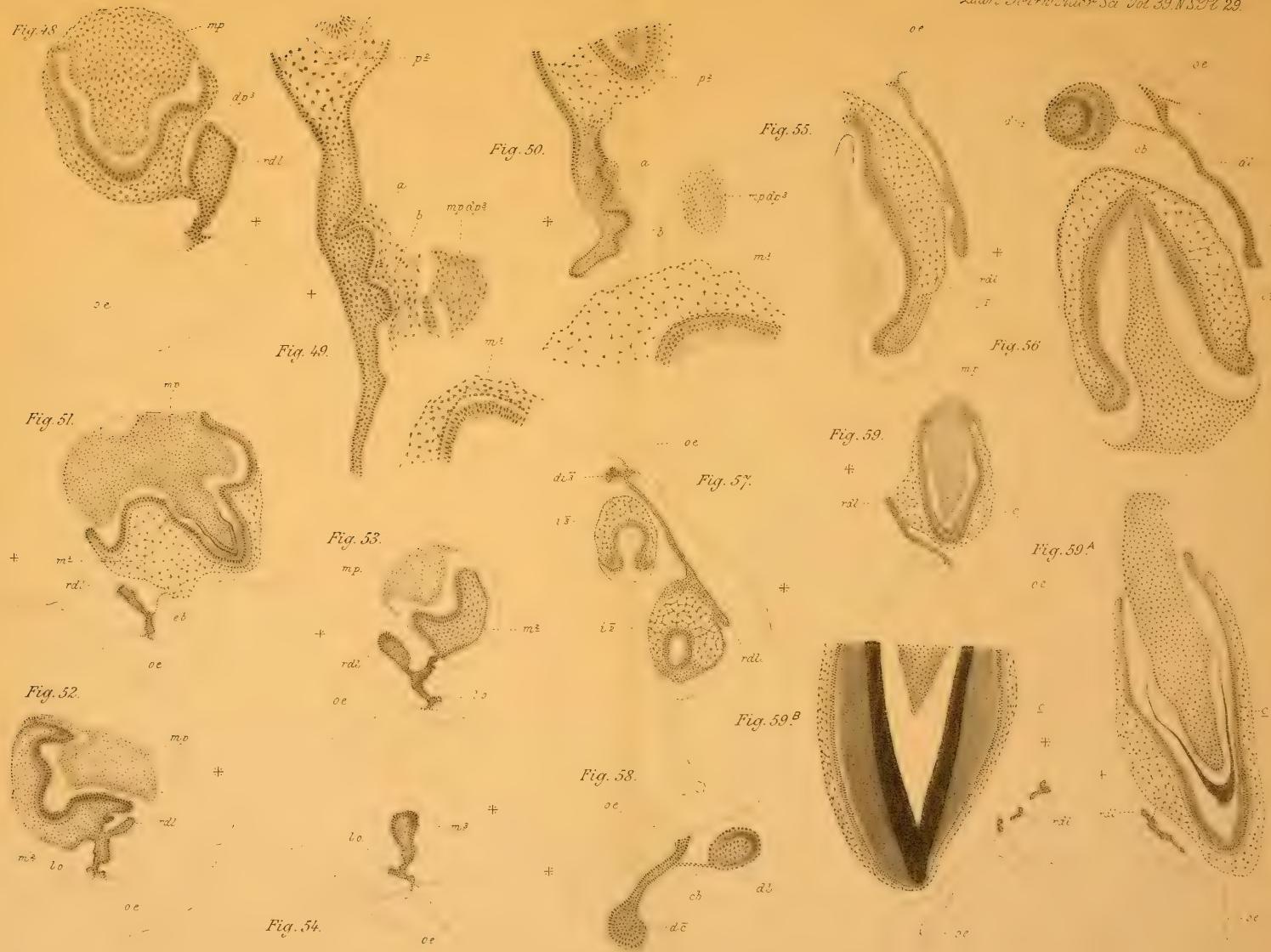
Fig. 47.

















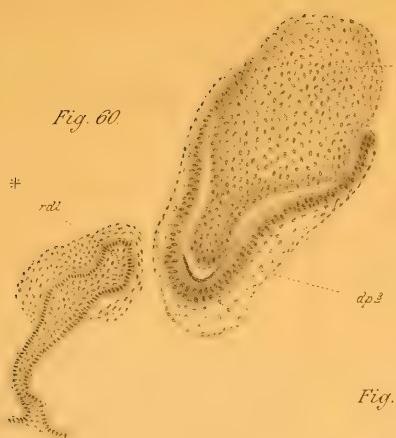


Fig. 60.

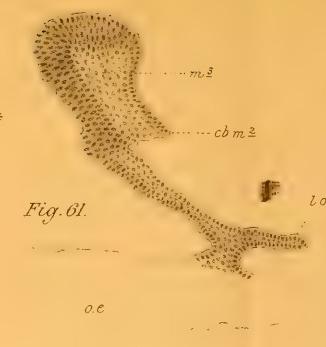


Fig. 61.

Fig. 66.

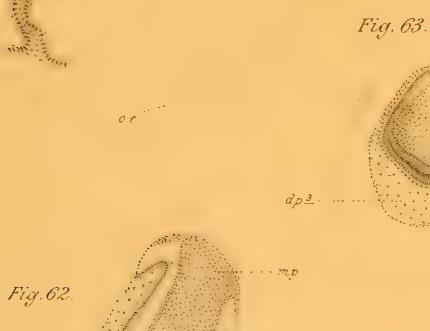
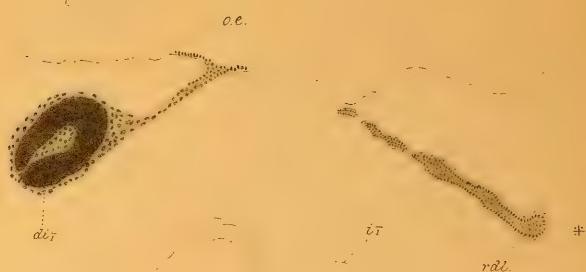


Fig. 62.

Fig. 65.



Fig. 64.

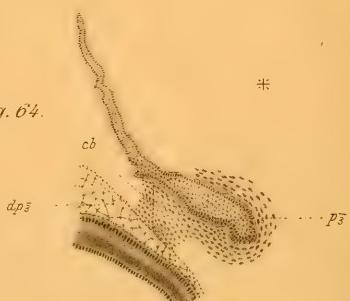


Fig. 66<sup>A</sup>.











Fig. 67.

Fig. 68.



Fig. 68<sup>A</sup>



Fig. 69.



Fig. 70.

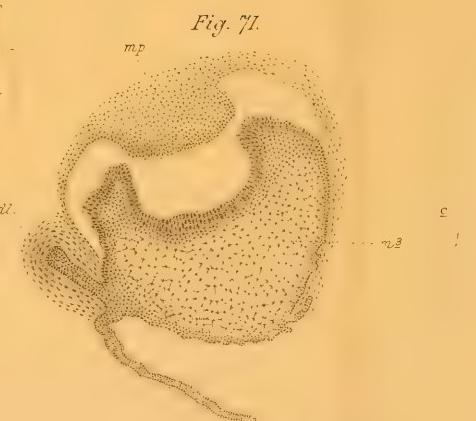


Fig. 71.

Fig. 72.



Fig. 73.

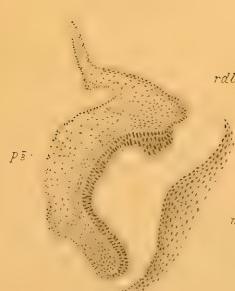


Fig. 74.



Fig. 75.

Fig. 76.

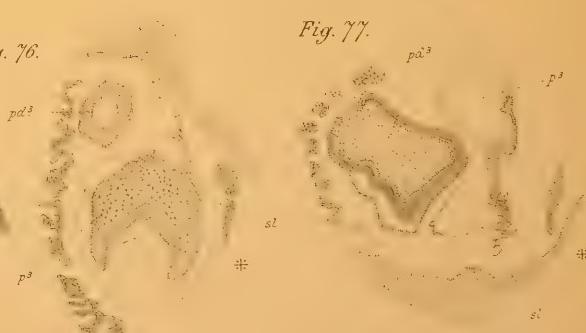


Fig. 77.







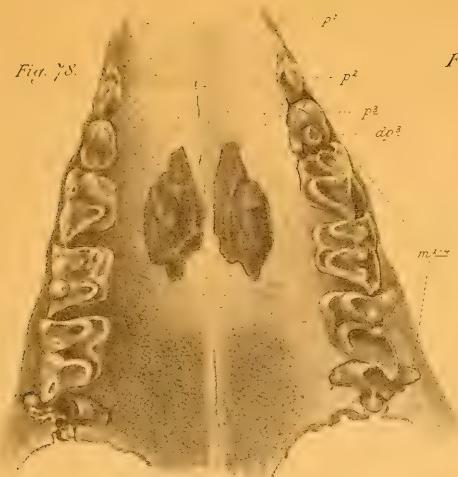


Fig. 78.

Fig. 79.

Fig. 80.



Fig. 81.



Fig. 82

Fig. 83.

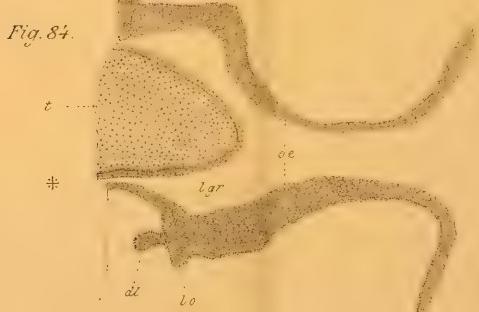


Fig. 84.











3 2044 110 319 837

Date Due

---

APR - 1970

